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ABSTRACT

The mid-1976 population estimates for 73 Arizona nonmetropolitan communities and their immediately surrounding areas were computed using a ratio between selected population indicators and actual population as established for each community by the U.S. Bureau of Census in census years. The resultant persons-per-indicator was then multiplied times the 1976 number for each indicator. The general census was conducted for all communities in 1970 and special censuses were conducted for 33 nonmetropolitan communities in 1975. Both censuses were used to provide base ratios where applicable, and where not applicable, the 1970 census was used. Population indicators used were elementary school average daily membership for the 1975-76 school year; residential postal boxes and deliveries--U.S. Postal Service, 1976; residential phone connections--Mountain Bell Telephone Company, July 1976; and residential electric customers--Arizona Public Service, July 1976 and Citizens Utilities Company, August 1976. A range in population was estimated because the data on the population indicators were not defined in a consistent explicit manner for each community. To provide a correction for possible large errors in the estimates, the ranges were compared with 1976 county data, especially the percent of county population growth prepared by the Arizona Department of Economic Security. Inconsistencies were noted in each table of indicators. (NQ)

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RAUL H. CASTRO, GOVERNOR OF ARIZONA

For further information about Arizona's nonmetropolitan communities, see:

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INTRODUCTION AND SUMMARY

An assessment of total population is basic to understanding the economic and social development of a community. Community population change serves as a valuable tool in analyzing economic growth, labor supply and the need for government programs. Total population also serves as a preliminary measure of the market for specific goods and services.

The most reliable population estimates are of course the decennial and special censuses conducted by the U. S. Bureau of the Census. However, in a rapidly developing state, such as Arizona, these figures quickly become outdated. Thus, it is impossible to use census figures for a meaningful measure of population in the years between censuses. This is especially true for nonmetropolitan communities in the state.

The Office of Economic Planning and Development (OEPAD) has long recognized this problem and has for the past three years produced the only published current population estimates of Arizona nonmetropolitan communities. The estimates are for all communities in the OEPAD Arizona Community Profiles series. This series includes most incorporated nonmetropolitan cities and towns as well as 29 unincorporated communities.

Table I presents a report of our population estimates for the 85 communities. A range in population was estimated because the data on elementary school enrollments, postal boxes, phone connections, and electrical hookups, which were used to indicate population, was not defined in a consistent explicit manner for each community.

A range in population is also a more realistic expression of the state of the art of population estimation. There is no method of determining precisely the number of people in a community at any one time. Even the Bureau of the Census does not make this claim. The indicators used in this report cannot help but include areas immediately surrounding a given community, nor can they necessarily be equal in size reported from indicator to indicator. Also, the boundaries are not necessarily based on political subdivisions boundaries - but on contigious population areas. These facts, however, do not negate an estimate of a reasonable range of population.

In addition to the population estimates presented in Table I, the report also serves the valuable function of presenting indicator data for Arizona communities in a single source. (See Tables II through V). The researchers hope that this data will be of use to both private and public analysts.

METHODOLOGY

A ratio projection method was used to establish the mid-1976 population estimates for Arizona's nonmetropolitan communities. Ratio projection involves computing a ratio between selected population indicators and actual population as established for each community by the U.S. Bureau of Census in census years. The resultant persons-per-indicator is then multiplied times the 1976 number for each indicator. The result is the current estimate of population for each indicator.

The general census was conducted for all communities in 1970 and special censuses were conducted for 33 nonmetropolitan communities in 1975. The researchers used both censuses to provide base ratios where applicable and the 1970 census elsewhere.

The population indicators used in the study are:

1. Average daily membership on which state aid is paid for elementary school districts (Arizona Office of the Superintendent of Public Instruction for school year 1975-76).

2. Residential postal boxes and deliveries (U.S. Postal Service, 1976).

3. Residential phone connections (Mountain Bell Telephone Company, July, 1976).

4. Residential electric customers (Arizona Public Service, July, 1976 and Citizens Utilities Company, August, 1976).

The combined application of the methodology for the four indicators gave a range of specific population estimates. These ranges resulted in part from the fact that the indicator data did not cover a precisely defined geographic area. The districts which are the source of the indicator data often include various areas outside of a given community's boundaries. These boundaries are inconsistent from indicator to indicator.

To provide a correction for possible large errors in the estimates, the ranges were compared with 1976 county data, especially the percent of county population growth, prepared by the Arizona Department of Economic Security. Inconsistencies have been noted in each table of indicators. The informed judgement of persons familiar with the individual communities was also used as a check against significant error.

Alternative methodologies, especially a multiple linear regression analysis, might appear useful in estimating nonmetropolitan community population. However, the heterogeneous character of Arizona's communities and the lack of a sufficient historical data base make the use of alternative methodologies inappropriate at this time.

The ratio projection methodology and the resulting population ranges, thus, give a reasonable estimate of population for the seventy-three communities and their immediately surrounding areas.

TABLE I

1976 NON-METROPOLITAN COMMUNITY

AREA ESTIMATES

	1970 Census	Mid-Decade (1975) Census	1976 Pop. Est.	% Change 1970-1976
Ajo	5,881	6,199*	5,650- 5,800	- 2.6%
Apache Junction	4,400	-	7,800- 8,000	+ 79.5%
Arizona City	625	-	750- 900	+ 32 %
Arizona Sunsites	-	-	850- 1,000[1]	-
Bagdad	2,079	-	2,100- 2,150	+ 2.2%
Benson	2,839	3,413	3,500- 3,725	+ 27.2%
Bisbee	8,328	-	8,500- 8,700	+ 3.3%
Buckeye	2,599	-	3,300- 3,500	+ 30.8%
Bullhead City	610	-	1,ooo- 1,300	+ 88.5%
Camp Verde	-	-	3,500- 3,700	-
Casa Grande	10,536	13,598	13,800-14,200	+ 32.8%
Cavecreek/Carefree	1,285	-	1,600- 1,900	+ 36.1%
Chandler	14,250	20,034	22,000-25,000	+ 64.9%
Clarkdale	892	1,067	1,050- 1,150	+ 23.3%
Clifton/Morenci	8,140	-	8,500- 9,000	+ 7.4%
Coolidge	6,417	6,711	7,500- 7,750	+ 18.8%
Cottonwood	2,815	3,590	4,500- 5,000	+ 68.7%
Dolan Springs	-	-	650- 700[1]	-
Douglas	12,462	12,422	12,500-13,000	+ 2.3%
Duncan	733	-	800- 900	+ 15.9%
Eagar	1,279	1,962	1,900- 2,000	+ 52.4%

	1970 Census	Mid-Decade (1975) Census	1976 Pop. Est.	% Change 1970-1976
Eloy	5,381	6,493	6,750- 6,850	+ 26.3%
Flagstaff	26,117	31,370	32,000-35,000	+ 28.2%
Florence	2,248	2,926	3,000- 3,250	+ 39 %
Fredonia	798	-	850- 1,000	+ 15.9%
Gila Bend	1,795	-	3,300- 3,500	+ 89.4%
Gilbert	1,971	3,603	3,650- 3,950	+ 92.8%
Globe	7,333	6,396	6,450- 6,600	- 11 %
Green Valley	2,998	4,161	4,500- 5,000	+ 58.4%
Greer	-	-	200- 350[1]	-
Hayden	1,283	-	1,300- 1,500	+ 9.1%
Heber/Overgaard	960	-	1,000- 1,050	+ 6.8%
Holbrook	4,759	5,093	5,250- 5,500	+ 12.9%
Huachuca City	1,241	1,691	1,700- 2,000	+ 49.1%
Jerome	290	-	400- 500	+ 55.2%
Joseph City	-	-	1,100- 1,350[1]	
Kearny	2,829	2,583	2,800- 3,000	+ 2.5%
Kingman	7,312	14,166*	13,800-14,200	+ 91.5%
Lake Havaru City	7,000	-	10,500-11,500	+ 57.1%
Mammoth/Oracle/San Manuel	8,522	2,042 (Mammoth Only)	9,700- 9,900	+ 14.9%
Mayer	-	-	950- 975[1]	-
Miami	3,394	-	3,650- 3,900	+ 11.2%
Nogales	8,946	-	10,000-10,500	+ 14.5%
Page	1,439	5,892	5,850- 6,000	+311.7%
Parker	1,948	-	8,200- 9,200	+346.6%
Patagonia	630	-	700- 1,000	+ 34.9%

	1970 Census	Mid-Decade (1975) Census	1976 Pop. Est.	% Change 1970-1976
Payson	1,490	2,890	2,900- 3,100	+101.3%
Picacho/Picacho Peak/Red Rock	-	-	600- 650	-
Pima	1,184	1,442	1,500- 1,600	+ 30.9%
Pinetop/Lakeside	2,600	-	6,500- 7,500	+169.2%
Pine/Strawberry	-	-	400- 425[1]	-
Prescott	13,134	16,888	17,000-17,500	+ 31.3%
Rio Rico	-	-	1,300- 1,500[1]	-
Safford	5,333	5,947	6,300- 6,750	+ 22.3%
St. Johns	1,320	1,838	1,900- 2,000	+ 47.7%
Sedona/Oak Creek	2,022		3,500- 4,000	+ 85.4%
Seligman	-	-	850- 1,000[1]	-
Show Low	2,129	3,378	3,500- 3,750	+ 70.2%
Sierra Vista	17,324	20,121	20,200-20,500	+ 17.4%
Snowflake	1,977	2,573	2,600- 2,750	+ 35.3%
Somerton	2,225	3,096	3,100- 3,500	+ 48.3%
Springerville	1,151	-	1,450- 1,600	+ 32.5%
Superior	4,975	-	5,400- 5,700	+ 11.5%
Taylor	887	1,501	1,500- 1,700	+ 80.2%
Thatcher	2,320	2,866	2,900- 3,300	+ 33.6%
Tombstone	1,241	-	1,800- 1,850	+ 47.1%
Wellton	967	-	1,000- 1,050	+ 5.9%
Wickenburg	2,698	2,908	3,200- 3,400	+ 22.3%
Willcox	2,568	2,704	2,800- 3,100	+ 14.9%
Williams	2,886	-	4,000- 4,250	+ 42.9%
Winkelman	974	-	1,100- 1,300	+ 23.2%

	1970 Census	Mid-Decade (1975) Census	1976 Pop. Est.	% Change 1970-1976
Winslow	8,066	7,663	7,700- 8,100	- 2.0%
Yarnell/Peeples Valley	840	-	850- 950	+ 7.1%
Yuma	29,000	30,081	33,000-35,000	+ 17.2%

* Census includes area outside of city proper.

1. No input available on this community. Population range based on local community and/or private development organization estimates. In some instances, other data were used if available.

TABLE II

Elementary School Average Daily Membership 1970-76

	1970	1976
Ajo	1,100	1,187
Apache Junction	539	1,063
Arizona City	163	291
Arizona Sunsites	-	126
Bagdad	453	445
Benson	545	664
Bisbee	1,546	1,087
Buckeye	892	851
Bullhead City	469	728
Camp Verde	374	481
Casa Grande	2,322	3,293
Cavecreek/Carefree	281	418
Chandler	3,018	4,263
Clarkdale	186	193
Clifton/Morenci	1,411	1,598
Coolidge	1,685	1,873
Cottonwood	734	1,240
Dolan Springs	67	95
Douglas	3,049	3,018
Duncan	358	449
Eagar (includes Springerville)	-	749
Eloy	1,431	1,504
Flagstaff	4,673	5,370
Florence	663	746
Fredonia	167	289
Gila Bend	478	498
Gilbert	-	-
Globe	1,410	1,651
Green Valley	473	139
Greer	-	-
Hayden	522	536
Heber/Overgaard	178	192
Holbrook	1,201	1,512
Huachuca City	-	-
Jerome	186	193
Joseph City	192	-
Kearny	996	1,035
Kingman	1,991	2,382
Lake Havasu City	800	1,690
Mammoth/Oracle/San Manuel	1,859	2,109
Mayer	122	-
Miami	1,465	1,579
Nogales	2,518	2,950
Page	866	1,341
Parker	1,013	1,276
Patagonia	93	106
Payson	367	553
Picacho/Picacho Peak/Red Rock	261	215
Pima	326	411
Pinetop/Lakeside	520	721

TABLE II

(Continued)

	1970	1976
Pine/Strawberry	2,408	-
Prescott	-	2,773
Rio Rico	1,418	-
Safford	337	1,644
St. Johns	-	444
Sedona/Oak Creek	-	-
Seligman	-	-
Show Low	498	834
Sierra Vista	1,770	2,850
Snowflake (includes Taylor)	828	1,386
Somerton	793	1,124
Springerville (also Eagar)	685	749
Superior	1,060	953
Taylor	-	-
Thatcher	545	740
Tombstone	477	701
Wellton	391	412
Wickenburg	365	520
Willcox	988	965
Williams	534	509
Winkelman	996	1,035
Winslow	1,527	2,438
Yarnell/Peeples Valley	-	-
Yuma	5,991	5,900

SOURCE: Annual Report, 1975-76, Superintendent of Public Instruction.

NOTE: (-) indicates data was not available.

TABLE III

Community Postal Boxes/Deliveries 1970-76

	1970	1976
Ajo	910	2,991
Apache Junction	3,267	5,928
Arizona City	-	-
Arizona Sunsites	-	-
Bagdad	586	597
Benson	1,113	1,356
Bisbee	4,195	3,834
Buckeye	932	2,933
Bullhead City	2,145	2,785
Camp Verde	741	896
Casa Grande	1,446	6,599
Cavecreek/Carefree	777	1,054
Chandler	604	9,055
Clarkdale	351	392
Clifton/Morenci	2,653	2,616
Coolidge	1,195	3,918
Cottonwood	1,099	1,444
Dolan Springs	-	-
Douglas	1,234	5,754
Duncan	314	813
Eagar	307	386
Eloy	703	2,558
Flagstaff	-	11,149
Florence	912	1,011
Fredonia	228	300
Gila Bend	620	720
Gilbert	904	1,241
Globe	1,697	4,809
Green Valley	-	3,758
Greer	185	110
Hayden	507	510
Heber/Overgaard	250	240
Holbrook	1,000	1,882
Huachuca City	496	944
Jerome	163	220
Joseph City	134	151
Kearny	1,028	1,085
Kingman	-	5,969
Lake Havasu City	1,938	2,765
Mammoth/Oracle/San Manuel	1,056	2,555
Mayer	304	414
Miami	952	1,992
Nogales	1,348	5,545
Page	590	2,150
Parker	1,866	2,252
Patagonia	327	405
Payson	1,028	1,346
Picacho/Picacho Peak/Red Rock	229	232
Pima	417	493
Pinetop/Lakeside	1,122	1,702

TABLE III

(Continued)

	1970	1976
Pine/Strawberry	-	158
Prescott	-	9,922
Rio Rico	-	-
Safford	723	3,570
St. Johns	462	561
Sedona/Oak Creek	1,594	2,497
Seligman	-	269
Show Low	928	1,565
Sierra Vista	1,483	9,490
Snowflake	688	743
Somerton	869	982
Springerville	564	570
Superior	1,213	2,149
Taylor	211	295
Thatcher	878	840
Tombstone	585	660
Wellton	562	611
Wickenburg	1,551	1,758
Willcox	926	2,311
Williams	634	1,414
Winkelman	884	814
Winslow	1,310	4,693
Yarnell/Peeples Valley	384	430
Yuma	-	18,605

SOURCE: U. S. Post Office

NOTE: (-) indicates data was not available

TABLE IV

Community Residential Phone Connections, 1970-1976

	1970	1976	
Ajo	1,433	1,654	
Apache Junction	1,549	3,016	
Arizona City	-	-	
Arizona Sunsites	-	-	
Bagdad	341	581	
Benson	830	1,633	
Bisbee	2,689	2,810	
Buckeye	1,225	1,877	
Bullhead City	-	-	
Camp Verde	572	1,433	
Casa Grande	2,496	4,785	
Cavecreek/Carefree	496	1,107	
Chandler	-	6,655	
Clarkdale	-	-	
Clifton/Morenci	1,992	2,801	(Clifton only)
Coolidge	1,524	2,344	
Cottonwood	1,206	2,599	
Dolan Springs	-	-	
Douglas	3,188	4,073	
Duncan	221	467	
Eagar	-	-	
Eloy	937	1,601	
Flagstaff	5,435	6,190	
Florence	538	879	
Fredonia	-	34	
Gila Bend	320	502	
Gilbert	-	1,850	
Globe	3,226	4,258	
Green Valley	1,522	3,276	
Greer	(1971) 92	147	
Hayden	722	1,045	
Heber/Overgaard (Heber only)	248	506	
Holbrook	846	3,723	
Huachuca City	-	-	
Jerome	-	-	
Joseph City	101	263	
Kearny	-	1,044	
Kingman	-	-	
Lake Havasu City	-	-	
Mammoth/Oracle/San Manuel	1,463	2,385	
Mayer (includes Humboldt)	-	583	
Miami	1,456	1,671	
Nogales	2,311	3,959	
Page	335	1,254	
Parker	1,430	2,749	
Patagonia	129	481	
Payson	424	1,671	
Picacho/Picacho Peak/Red Rock	-	-	
Pima	263	619	
Pinetop/Lakeside (Pinetop only)	1,470	3,107	

TABLE IV

(Continued)

	1970	1976
Pine/Strawberry (Pine only)	121	318
Prescott	4,957	8,365
Rio Rico	-	241
Safford	1,948	3,614
St. Johns	569	1,162
Sedona/Oak Creek	984	2,419
Seligman	117	174
Show Low	1,615	2,862
Sierra Vista	3,125	8,411
Snowflake	1,148	1,898
Somerton	351	948
Springerville	1,162	1,654
Superior	949	1,131
Taylor	-	-
Thatcher	-	-
Tombstone	318	466
Wellton	236	613
Wickenburg	998	1,621
Willcox	780	1,460
Williams	526	844
Winkelman	-	-
Winslow	1,969	2,230
Yarnell/Peeples Valley (Yarnell only)	190	376
Yuma	9,600	14,143

SOURCE: Mountain Bell Telephone and Continental Telephone Company (depending on service area).

NOTE: (-) indicates data was not available

TABLE V

Community Residential Electrical Hookups, 1970-1976

	1970	1976
Ajo	-	-
Apache Junction	-	7,551
Arizona City	-	-
Arizona Sunsites	-	-
Bagdad	-	-
Benson	995	-
Bisbee	2,702	3,237
Buckeye	2,078	2,723
Bullhead City	-	364
Camp Verde	-	-
Casa Grande	2,669	4,156
Cavecreek/Carefree	837	1,630
Chandler	3,689	4,294
Clarkdale (includes Centerville)	419	479
Clifton/Morenci	3,039	-
Coolidge	1,466	1,873
Cottonwood	1,130	2,084
Dolan Springs	-	281
Douglas	3,589	4,821
Duncan	229	761
Eagar	-	-
Eloy	1,151	2,104
Flagstaff	6,431	10,986
Florence	615	849
Fredonia	-	-
Gila Bend	490	942
Gilbert	-	-
Globe	2,060	3,235
Green Valley	-	-
Greer	-	-
Hayden	386	374
Heber/Overgaard	-	-
Holbrook	1,272	1,627
Huachuca City	-	-
Jerome	231	215
Joseph City	199	-
Kearny	769	833
Kingman	-	2,612
Lake Havasu City	2,011	4,491
Mammoth/Oracle/San Manuel	-	-
Mayer	-	-
Miami	3,020	3,488
Nogales	-	-
Page	656	1,085
Parker	3,084	5,249
Patagonia	248	-
Payson	-	-
Picacho/Picacho Peak/Red Rock	-	-
Pima	-	-
Pinetop/Lakeside	-	-

TABLE V

(Continued)

	1970	1976
Pine/Strawberry	-	-
Prescott	5,010	10,571
Rio Rico	-	-
Safford	1,746	-
St. Johns	-	-
Sedona/Oak Creek	-	-
Seligman (includes Ashfork)	-	584
Show Low	563	1,176
Sierra Vista	1,883	-
Snowflake	452	750
Somerton	960	1,404
Springerville	726	-
Superior	1,440	1,462
Taylor (includes Shumway)	490	735
Thatcher	485	-
Tombstone	421	483
Wellton	1,100	1,425
Wickenburg	1,125	1,565
Willcox	1,009	-
Williams	707	1,244
Winkelman	-	-
Winslow	2,732	2,714
Yarnell/Peeples Valley	-	-
Yuma	8,735	15,690

SOURCE: Arizona Public Service Company, Citizens Utilities Company, Salt River Project, Mohave Co-op, Morenci Water and Electric Company, Duncan Valley Electric Co-op, Wellton-Mohawk Irrigation and Drainage District depending on service area.

NOTE: (-) indicates data was not available.

TABLE VI

U.S. Census Bureau Mid-decade Population Reports

Community	Mid-decade Population
Ajo	5,618
Benson	3,413
Casa Grande	14,598
Clarkdale	1,042
Douglas	12,422
Eagar	1,962
Eloy	6,493
Flagstaff	31,370
Florence	2,926
Gilbert	3,603
Globe	6,396
Green Valley	4,161
Holbrook	5,093
Huachuca City	1,691
Page	5,892
Payson	2,890
Safford	5,947
St. Johns	1,838
Show Low	3,378
Sierra Vista	20,121
Snowflake	2,573
Somerton	3,096
Taylor	1,501
Thatcher	2,866
Wickenburg	2,908
Willcox	2,704
Winslow	7,663
Yuma	30,813

TABLE VII

1976 Preliminary County Population Estimates

County	1976 Population Estimates
Apache	42,400
Cochise	76,800
Coconino	67,200
Gila	32,700
Graham	20,500
Greenlee	11,900
Maricopa	1,260,500
Mohave	38,400
Navajo	58,500
Pima	455,200
Pinal	89,500
Santa Cruz	18,100
Yavapai	50,700
Yuma	72,600
Arizona	2,295,000

Source: Arizona Department of Economic Security 1976 Preliminary Estimates

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